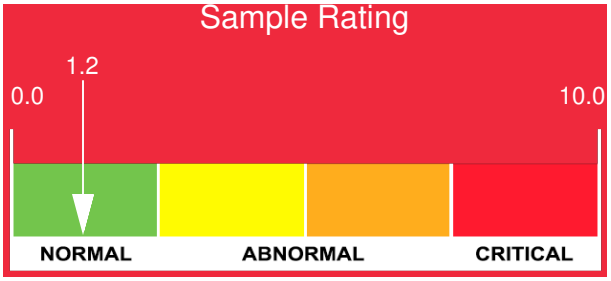
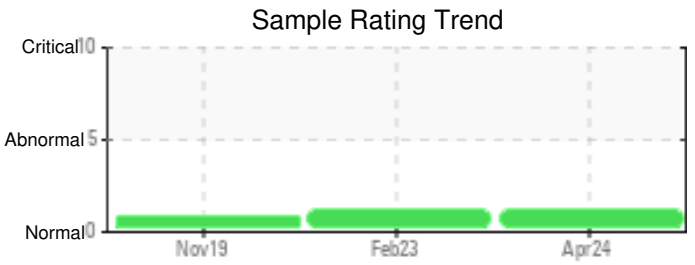




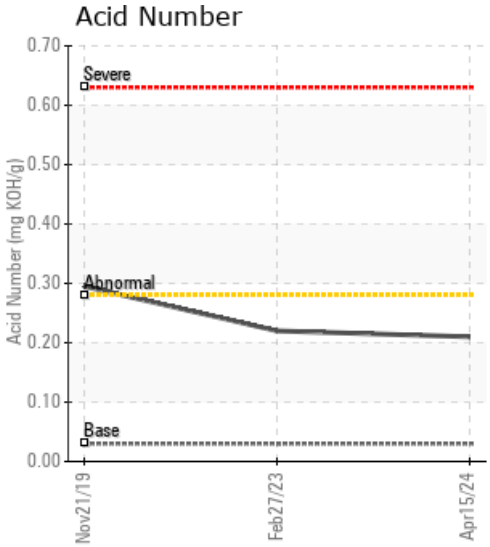
RRRTANK

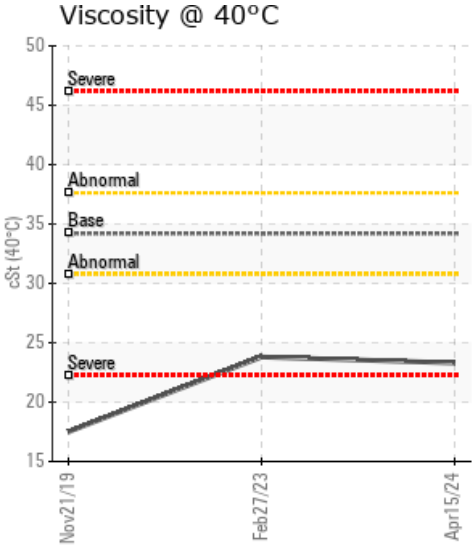
Customer: PTRHTF30107	System Information	Sample Information
D-CONSTRUCTION 16805 QUARRY RD MORRIS, IL 60450 US Attn: Chris Lenzie Tel: (815)405-6831 E-Mail: clenzie@sandenoinc.com	System Volume: 2000 gal Bulk Operating Temp: 380F / 193C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: FULTON BOILER	Lab No: 02630812 Analyst: Yvette Trzcinski Sample Date: 04/15/24 Received Date: 04/22/24 Completed: 04/25/24 Yvette Trzcinski yvette.trzcinski@HFSinclair.com

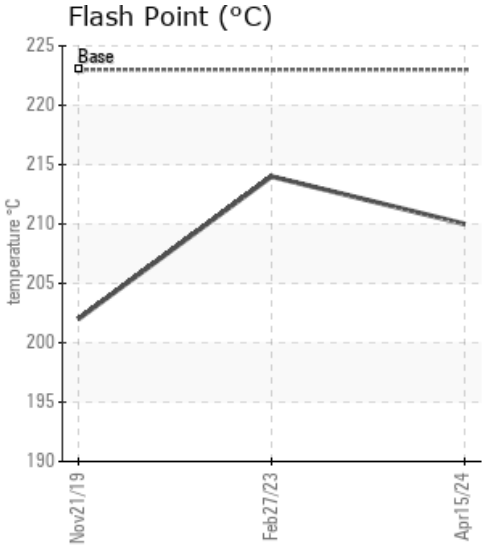
Recommendation: Viscosity is holding at around 23 cSt has increased over time as Petro-therm has been added to the system the solids are low and the acid number has remained at 0.2 fluid is acceptable for continued service resample in 9-12 months

Comments: Visc @ 40°C is abnormally low. (GCD) 90% Distillation Point is marginally low.

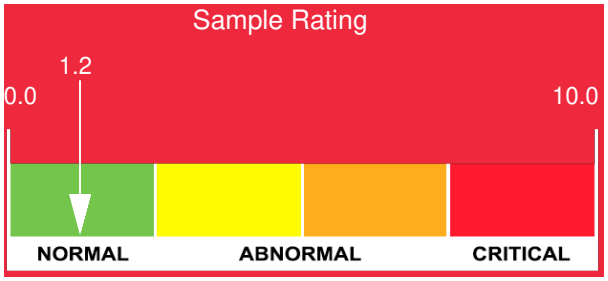
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
04/15/24	04/22/24	0.0y		410 / 210	12	23.3	0.21	0.018	684 / 362	773 / 412	880 / 471	0.92
02/27/23	03/03/23	5.0y		417 / 214	13.4	23.8	0.22	0.052	683 / 362	771 / 410	875 / 468	1.43
11/21/19	11/22/19	5.0y		396 / 202	14.3	17.5	0.295	0.088	648 / 342	716 / 380	812 / 433	4.49
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00

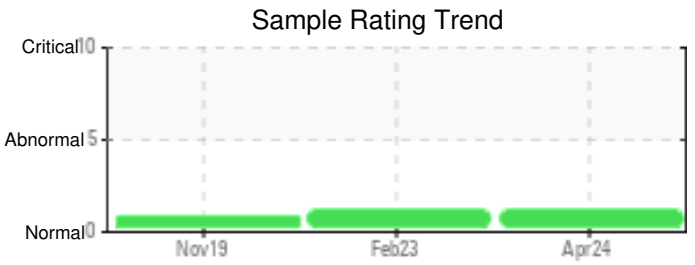






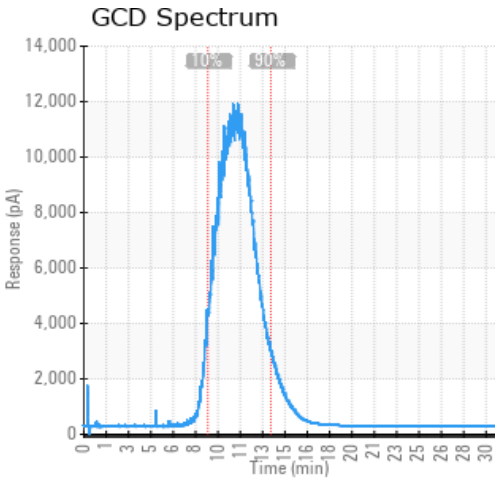
PETRO-CANADA LUBRICANTS

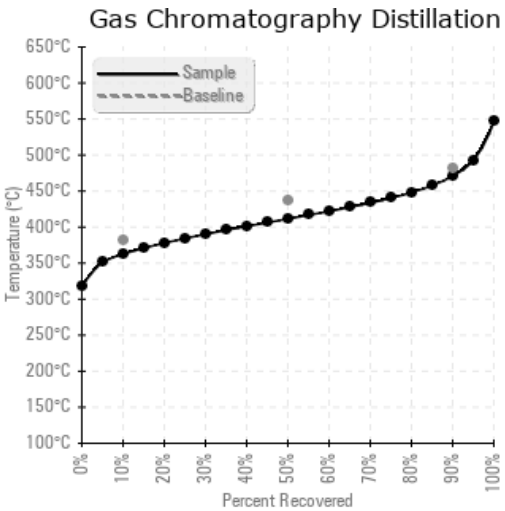


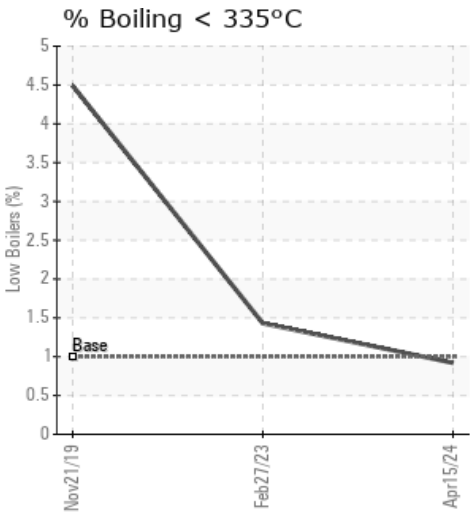


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
04/15/24	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02/27/23	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
11/21/19	2	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Baseline Data			0	0						0			0	0					0				0	

Elemental anaysis results (above) in parts per million (ppm). [10,000 ppm = 1.0%]







Historical Comments

02/27/23	Customer has been topping up with Petro-Canada Petro-Therm explains the increase in the viscosity from an ISO 15 to an ISO 22. Flash point and boiling points are within specification and the solids are low. the fluid looks good and is acceptable for continued service. Resample in 9-12 months (GCD) 90% Distillation Point is abnormally high. Visc @ 40°C is abnormally high.
11/21/19	The fluid name is not listed on this sample and does not match the viscosity of the Pritherm NF-1 that customer mentioned was the fluid in use- need to verify what fluid is in the system. This fluid is experiencing thermal degradation - 90% distillation point is low, but low boilers and solids are within acceptable limits as well as the Acid number - resample in 6 months (GCD) 90% Distillation Point is abnormally low.